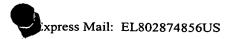## ABSTRACT OF DISCLOSURE

Disclosed is an integrated tone detection processor for discriminating between tone and voice signals and determining the tones. The tone detection processor performs Automatic Gain Control (AGC) to normalize the power of the tone or voice

5   signal. Further, the energy of the tone or voice signals are determined at specific frequencies utilizing a Goertzel Filter process. The tone detection processor determines whether or not a tone is present, and if a tone exists, determines the type of tone. Based upon determining the two maximum energy levels of the Goertzel filtered tone, whether the tone is a single tone, dual tone, silence, or other (e.g. speech) can be

10   discriminated. The tone can then be identified by a user-defined dictionary of tones. Based upon various ON and OFF cadence checks in combination with the use of TONE ON and TONE OFF counters, tones can be declared.